



NSHP Application Process

New Solar Homes Partnership Training Workshop
Irwindale, California

March 9, 2010

Diana Chong
Renewable Energy Office
Efficiency & Renewable Energy Division
dchong@energy.state.ca.us / 916-653-1628



Players

- **Applicant:** homeowner, builder/developer
- **PV Retailer:** the entity that sells/provides solar equipment to the project. Must be registered with the Energy Commission to participate in the program.
- **PV Installer:** the entity that installs the solar equipment on the project. Must be registered with the Energy Commission and have an active California A, B, C-10 or C-46 contractor license in order to participate in the program.



Players

- **Certified Energy Plans Examiner:** the entity that reads the construction plan-set and/or records the home's as built specifications and creates the energy efficiency documentation for the program. Must be certified by CABEC.
- **HERS Rater:** verifies and tests that the PV system and the energy efficiency measures are installed and passes.



Players

- **Program Administrator:** Energy Commission's partner in the electric service territories who conducts the day-to-day administration of the NSHP program.
- **Energy Commission:** oversees the NSHP program by ensuring program goals are met and providing guidance to Program Administrators



Complete Applications...

- Meet all NSHP program requirements and administrative expectations.
- Have consistent names, site addresses, and equipment on all supporting documentation.
- Have all of the required signatures on the documents.
- Use the newest versions of documents and calculation tools supplied and/or authorized by the California Energy Commission.
- Include all required supporting documentation with the reservation application or payment claim package.

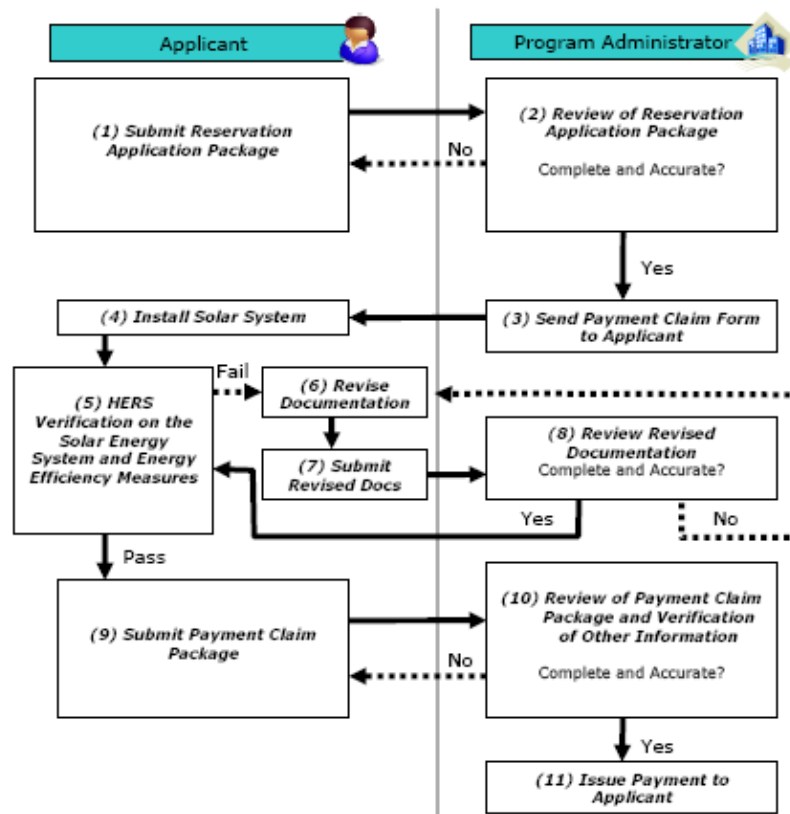


Big Picture – NSHP Application Process

1. Applicant submits reservation application package.
2. Program administrator reviews and approves.
Incentive is reserved for applicant.
3. Applicant installs PV system and energy efficiency measures.
4. HERS rater verifies and tests measures installed.
5. Applicant submits payment claim package.
6. Program administrator reviews and approves.
Incentive is paid.



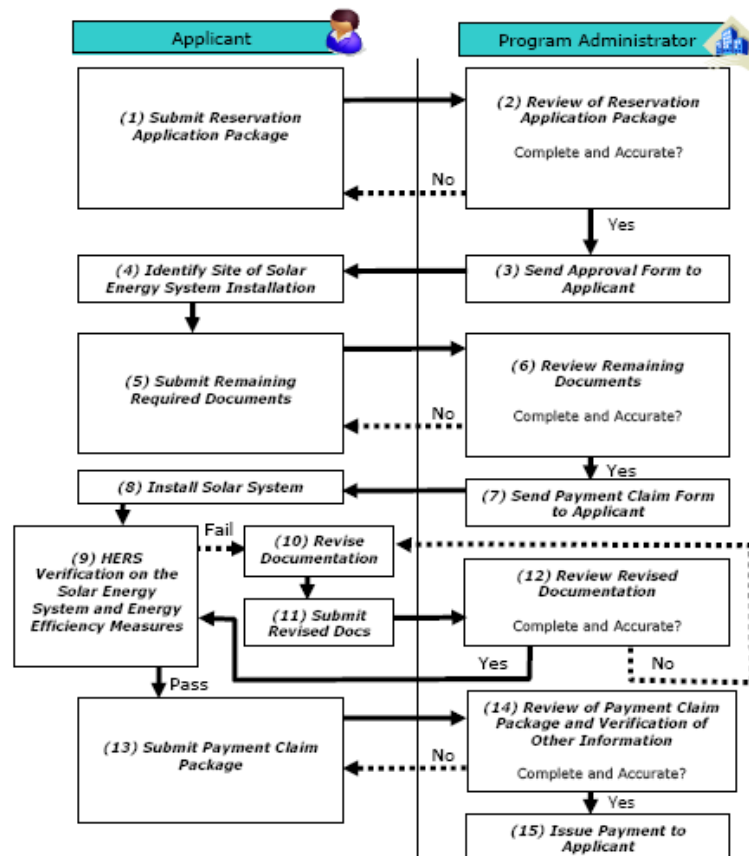
Process Flow Chart for All Projects, Except Solar as an Option



- Housing types eligible under this process include:
 - Solar as a standard feature,
 - Solar not a standard feature,
 - Small developments (6 homes or less),
 - Custom homes,
 - Common areas,
 - Affordable housing



Process Flow Chart for Solar as an Option Projects





Reservation Application Package



Reservation Application Form (NSHP-1)

A stack of three NSHP-1 forms is shown in the top right corner. The top form is clearly visible, showing the title "NSHP-1" and various sections for project information, including "Project Name", "Location", "Project Description", and "Applicant Information".

What It Is:

This form requests general information on the project. This form also gives the applicant the option to designate a party who can represent him on NSHP matters.

Required of:

- All housing types

What We Look For:

- All fields on the form are completed
- Form signed by the appropriate entities



New Residential Construction Building Permit



What It Is:

This is a document from the city or county stating that a new home is being constructed on the site where the solar energy system is being installed.

What We Look For:

- Applicant information and permit address matches that on the NSHP-1
- Permit is for the construction of a new home

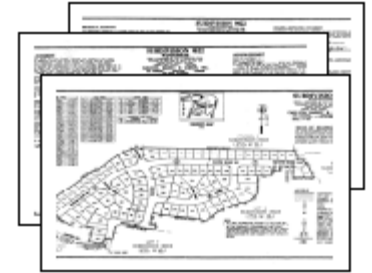
Generally submitted by:

- Base incentive applicants
 - Solar not as Standard
 - Small developments
 - Custom homes
 - Common areas
- Affordable housing

Reminder: to be eligible for the NSHP, solar permit should be pulled before the issuance of the certificate of occupancy, but no later than 60 days after. Multifamily affordable housing projects with occupancy permits less than two years old acceptable.



Final Subdivision Map



What It Is:

The final subdivision map is a document that illustrates where all of the homes participating in the NSHP are located. The document should be recorded with the city or county.

Required of:

- Solar as standard projects

Applicable to:

- All housing types



Certificate of Compliance Form: NSHP PV (CF-1R-PV)

A stack of three forms is shown in the top right corner. The top form is the "Certificate of Compliance Form: NSHP PV (CF-1R-PV)". It contains various fields for project information, system specifications, and a table for system components. The forms are slightly offset to show multiple copies.

What It Is:

The CF-1R-PV documents the system specifications and provides the estimated incentive amount for the system proposed.

The CF-1R-PV is created using the CEC PV Calculator. Each CF-1R-PV comes with two digital files: one with an extension of .her and the other with an extension of .emf. These files must also be submitted.



Certificate of Compliance Form: NSHP PV (CF-1R-PV)

A stack of three forms for the Certificate of Compliance Form: NSHP PV (CF-1R-PV). The forms are white with black text and lines, showing various sections for project information, equipment details, and a table for data entry.

What We Look For:

- The Calculator and equipment libraries used are certified at the time the reservation application is submitted
- Project address matches that on the NSHP-1
- Climate zone matches that on the CF-1R (the CF-1R is covered next)
- The correct housing type is selected
- Equipment matches that on the equipment purchase agreement
- The data in the digital files matches the information on the CF-1R-PV
- The form is signed by the appropriate entities

Required of:

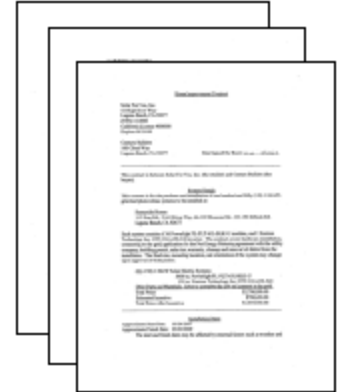
- All housing types projects

Note:

- If there are different systems being installed on the project, enter a unique project title for each CF-1R-PV. That way multiple sets of digital files will be available for you to submit.
- If the city where your solar project is located is not listed on the PV Calculator, pick a nearby city that is in the same climate zone as the city of your solar project.
- Data files generally in C drive, CECPV folder



Equipment Purchase Agreement



What We Look For:

The equipment purchase agreement includes information on:

- A list of physical addresses where the system installations are located
- Quantity, make and model number of the modules, inverters and meters to be installed at each address
- Total system cost
- Signatures from the applicant and retailer

Invoice acceptable if all of the above information is included and a minimum of 10% of the cost has been paid.

Required of:

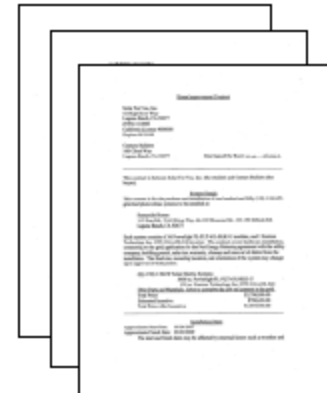
- All housing types projects
- Leased systems are exempt if an installation contract lists equipment.

Reminder: The retailer must be registered with the Energy Commission:

[www.gosolarcalifornia.ca.gov/database/addcompany.php]



Installation Contract



What We Look For:

The installation contract should include information on:

- The name, address and license number of the company performing the system installations,
- The site addresses of the system installations,
- Description of work that will be performed,
- Total agreed price to install the system,
- Payment terms,
- The approximate start and end dates of the job,
- A cancellation notice,
- Contact information for the Contractors State License Board,
- Any legal notices.

Required of:

- All housing types projects
- Self-installs are exempt

Reminder: The installer must be registered with the Energy Commission and have an active California A, B, C-10 or C-46 license.



Energy Efficiency Documentation – Title 24 Report (CF-1R/PERF-1)

What It Is:

The CF-1R or PERF-1 is a document that shows the energy efficiency measures being installed on the project. A CF-1R is for residential projects. A PERF-1 is for non-residential projects.

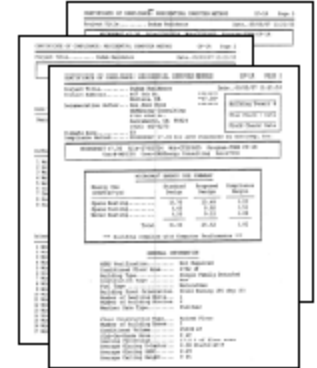
Required of:

- All housing types projects
- Affordable housing projects requesting funding from TCAC have up to 60 days after funding approval to submit this information.

Reminder: The CF-1R is generated by a Certified Energy Plans Examiner who is certified for the appropriate residential type and Building Standards that the home is constructed under.



Energy Efficiency Documentation – Title 24 Report (CF-1R/PERF-1)



What We Look For:

- The information on the CF-1R is consistent with the construction plan-set submitted (to be discussed next);
- The CF-1R/PERF-1 is created using compliance software for the set of Building Standards the home is constructed under;
- The CF-1R/PERF-1 states (or can be calculated) that the project is, at a minimum, 15 percent beyond Building Standards
- Project address matches that on the NSHP-1;
- Climate zone matches that on the CF-1R-PV;
- A certified CEPE or CEA documented and signed the CF-1R;
- An associated input file with an extension of .bld, .mp7/.mp8 is provided.



Energy Efficiency Documentation – Construction Plan-Set

What It Is:

The construction plan-set is a compilation of the plans that shows what will be installed on the home.

Specifically, the NSHP is looking for the set that includes:

- architectural floor plans, elevations and sections (including information on windows and other measures used for the Title 24 energy calculations);
- site plan indicating the north direction;
- mechanical plans, if applicable

Required of:

- All housing types projects
- Affordable housing projects requesting funding from TCAC have up to 60 days after funding approval to submit this information.

Note:

By participating in the California New Homes Program, Energy Efficiency Documentation is waived.



Regulatory Agreement

What It Is:

This document is generally between a developer and either the city/county, TCAC or other funding sources that requires the developer to restrict a certain number of units in the project for affordable housing.

What We Look For:

- The agreement is:
 - Executed (signed by all funding sources and the project developer)
 - Identifies the project, location, and the number of units subject to affordability requirements (at least 20 percent for extremely low, very low, lower or moderate income persons).
 - Restricts affordability to at least 10 years.

Required of:

- Affordable housing projects



Build-Out Schedule

What It Is:

A builder's projected timeline for completing the construction of dwelling units that will have solar energy systems installed.

Required of:

- Solar as an Option projects



Putting the Reservation Application Package Together

Solar as Standard Projects

- NSHP-1
- Final Subdivision Map
- CF-1R-PV and input files
- Equipment Purchase Agreement
- Installation Contract
- Energy Efficiency Documentation
 - CF-1R/PERF-1 and input files
 - Construction plan-set

Base Incentive Projects, except Solar as an Option

- NSHP-1
- Final Subdivision Map/Building Permit
- CF-1R-PV and input files
- Equipment Purchase Agreement
- Installation Contract
- Energy Efficiency Documentation
 - CF-1R/PERF-1 and input files
 - Construction plan-set



Putting the Reservation Application Package Together

Solar as an Option Projects

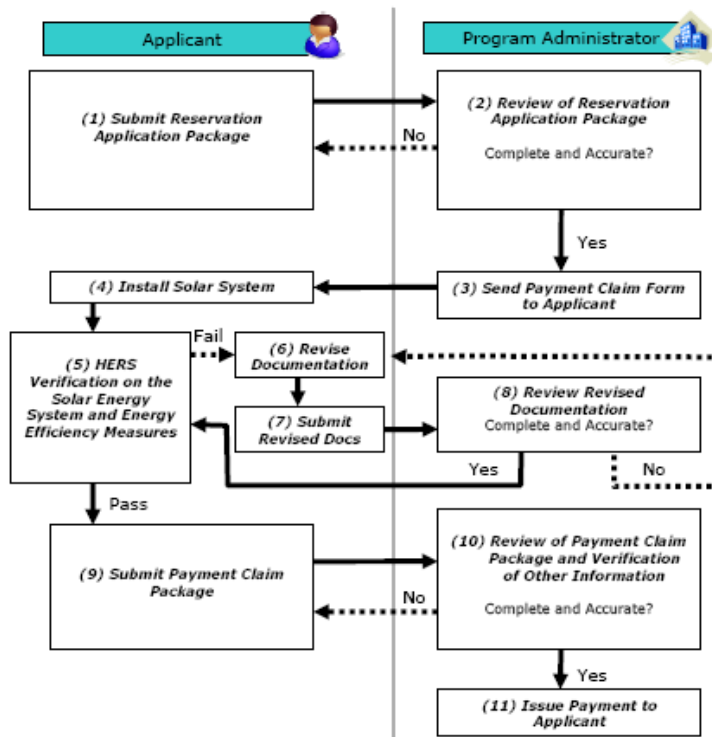
- NSHP-1
- Final Subdivision Map
- Equipment Purchase Agreement
- Installation Contract
- Build-Out Schedule

Affordable Housing Projects

- NSHP-1
- Supporting documents for the appropriate housing type
- Energy Efficiency Documentation, if available
- Regulatory Agreement



Upon Reservation Approval

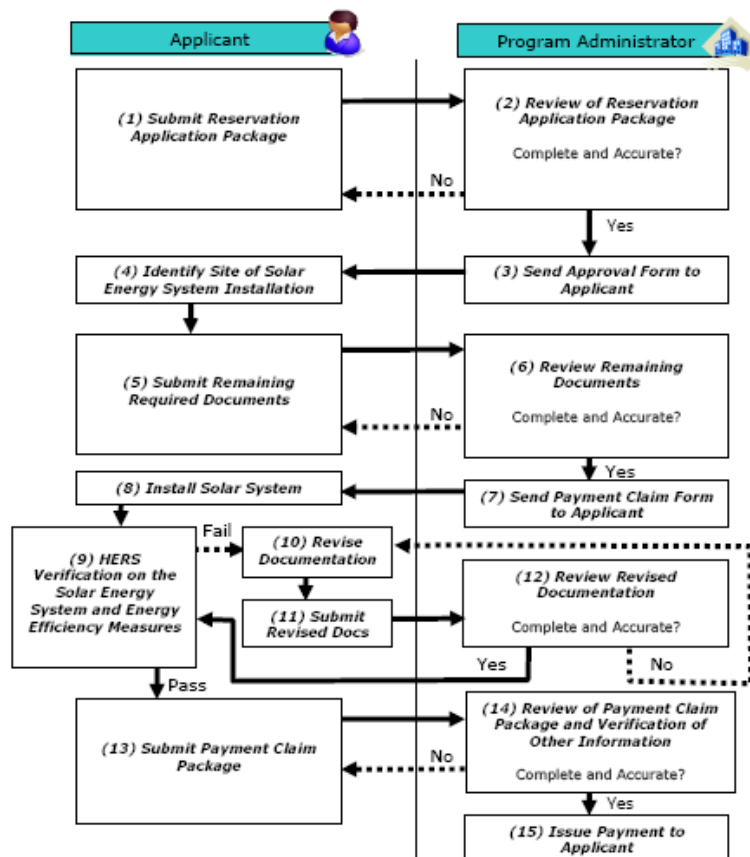


All Projects, except Solar as an Option

- Proceed to install system
- Have energy efficiency and solar energy system verified by HERS rater
- Collect documentation for NSHP payment claim
- Submit payment claim package



Upon Reservation Approval...



Solar as an Option Projects

- Identify site where a solar energy system is installed
- Submit supporting documentation specific to that site
 - NSHP 1.5
 - CF-1R-PV and input files
 - Energy Efficiency Documentation
 - CF-1R/PERF-1 and input file
 - Construction plan-set



Solar as an Option Approval Form

What It Is:

This document confirms the reserved amount for an approved solar as an option project. Applicants return this form completed once a site has been identified to have a solar energy system installed.

Required of:

- Solar as an Option projects

Next Steps:

- Once all supporting documentation for the site is submitted and approved by the Program Administrator, proceed to follow the steps outlined for all projects in the previous slide.



HERS Raters

- A HERS rater is a third-party inspector who tests and verifies energy efficiency measures and the solar energy system.
- Energy efficiency HERS raters affiliated with one of three HERS Providers: CHEERS, CalCERTS or CBPCA.
- Solar HERS raters affiliated with either CHEERS or CalCERTS.



HERS Raters

- **HIGHLY RECOMMENDED** that applicants select a HERS rater early in the application process. Verification of some energy efficiency measures may be required to be completed as early in the construction process as foundation or rough-in (i.e., assembly, piping insulation)
- **RECOMMENDED** that applicants select a HERS rater that can verify both energy efficiency measures and solar.



NSHP Energy Efficiency HERS Verification

- **All energy efficiency measures** used to meet the **above Title 24 requirements** for program participation shall be verified by a qualified HERS Rater.
- This means: everything on the CF-1R must be verified by a HERS Rater.
- This means: some measures may need to be verified early in the construction process (e.g., assembly, QII)
- HERS Rater goes to site multiple times during construction process to verify all measures.



HERS Verification Process



Before An EE HERS Rater Visit

- Builder/subcontractor completes an Installation Certificate for Energy Efficiency Measures (CF-6R)
- Only the sections that pertain to the energy efficiency measures installed must be completed.
- CF-6R is submitted to the HERS rater who verifies the energy efficiency measures
- All information on CF-6R should match the CF-1R.



Before A Solar HERS Rater Visit

- Solar Installer completes an Installation Certificate for Solar (CF-6R-PV)
- CF-6R-PV is submitted to the HERS rater who verifies the solar energy system.
- All information on CF-6R-PV must match the CF-1R-PV.
- One CF-6R-PV for every system installed. No sampling allowed.

A sample of the CF-6R-PV form, which is a detailed installation certificate for solar energy systems. It contains various fields for system information, including system type, capacity, and installer details.



After HERS Rater Visit

- HERS Rater will enter all data regarding the verification into HERS Provider's registry.
 - If all energy efficiency measures used to meet the above Title 24 requirements are verified, a CF-4R-NSHP will be created in the HERS Provider's registry. All projects required to pass to claim NSHP incentive.
 - If specific HERS tests were required (i.e., if CF-1R states "HERS Verification Required") and passed the inspection, a CF-4R will be created in the HERS Provider's registry. Not required of all projects.



After HERS Rater Visit

- HERS Rater will enter all data regarding the verification into HERS Provider's registry.
 - If the solar energy system is verified, a CF-4R-PV will be created in the HERS Provider's registry. All projects required to pass to claim NSHP incentive. Hard copy of CF-4R-PV must be printed, signed and submitted if inspection was conducted by a CHEERS Solar Rater.



Payment Claim Package



Payment Claim Form (NSHP-2)

What It Is:

This document confirms the incentive amount reserved for the site, requests data on various components of the NSHP process, and allows the payment to be reassigned.

What We Look For:

- Original signature(s) from the applicant/applicant's representative
- All system details are noted.

Required of:

- All housing types

The image shows a stack of NSHP-2 Payment Claim Forms. The top form is clearly visible, showing the title "NSHP-2 PAYMENT CLAIM FORM" and "NSHP-2 PAYMENT CLAIM FORM". It includes various sections for applicant information, project details, and a signature line. The form is titled "NSHP-2 PAYMENT CLAIM FORM" and "NSHP-2 PAYMENT CLAIM FORM". It includes various sections for applicant information, project details, and a signature line.



Ten Year Warranty Form (NSHP-3)

A thumbnail image of the NSHP-3 Ten Year Warranty Form is shown in the top right corner. The form is titled "NSHP-3 TEN-YEAR WARRANTY FORM" and contains various sections for project information, warranty details, and contact information.

What It Is:

This document indicates what is being covered by the ten-year warranty.

Required of:

- All housing types

What We Look For:

- The project address matches that on the NSHP-2.
- The type of warranty coverage is selected and a warranty effective date is provided.
- If only system installation is covered, manufacturer warranties stating that the manufacturer and installer will, in combination protect the modules and inverters against defective workmanship, system or component breakdown or degradation in output for ten years.
- The form contains the contact information of the warrantor and is signed.



Payee Data Record (STD-204)

A small thumbnail image of the STD-204 Payee Data Record form is shown in the top right corner. The form is a structured document with various sections and fields for data entry, including a header section, a main body with multiple rows and columns, and a footer section.

What It Is:

This is a standardized State document that must be completed by any entity that will be receiving funds from the State. If requested by the Program Administrator, applicant may also need to submit a W-9 Form.

Required of:

- All housing types

What We Look For:

- The information on the STD-204 matches the latest payee information on the NSHP-2.



Lease Agreement/PPA

A sample form for a Lease Agreement/PPA is shown in the top right corner. It is a multi-section document with various fields for information such as project name, location, and dates. The form is titled "LEASE AGREEMENT/PPA" and includes sections for "GENERAL INFORMATION", "LEASE INFORMATION", "PPA INFORMATION", and "SIGNATURES".

What It Is:

These are agreements for systems that are not initially purchased when applying to the NSHP.

Required of:

- Leased systems or systems subject to third-party ownership

What We Look For:

- Term of the agreement is a minimum of 10 years.
- The lessee is given the option to renew the lease, purchase or remove the system at the end of the initial term of the lease.
- Agreement demonstrates that the NSHP funding benefits the end-use customer
- The agreement is signed on or after July 1, 2009.



Putting the Payment Claim Package Together

- NSHP-2
- NSHP-3
- STD-204 (W-9, if requested)
- CF-4R-PV, if verification conducted by a CHEERS Solar Rater
- Lease Agreement/PPA, if applicable



Additional Verification by Program Administrator

- Solar energy system permitted to interconnect with utility grid
- CF-4R-NSHP and CF-4R-PV created and information accurate in HERS registry
- CF-4R, if applicable, created and information accurate in HERS registry



After Payment Claim is Approved

- SDG&E will write the NSHP payee a check for the incentive amount.



CALIFORNIA ENERGY COMMISSION

Scenario	When This Occurs	What New Information Needs to be Provided to the Program Administrator	What the Program Administrator Does with the New Information	Next Steps
Changes in Solar System Specifications (e.g., equipment, azimuth, shading)	While the Program Administrator is reviewing the application	Signed CF-1R-PV and electronic input files	Re-review	Wait for reservation approval
	After the application is approved	Signed CF-1R-PV and electronic input files	Re-review and upload to HERS database if HERS rater information has already been provided	Continue with installation and have the system verified by a HERS rater
	After a HERS verification is conducted	Signed CF-1R-PV and electronic input files	Re-review and upload to HERS database	HERS rater re-verifies solar system. If system passes test, then a CF-4R-PV is created.
Changes in the Energy Efficiency Measures, Construction Plan-Set	While the Program Administrator is reviewing the application	Signed CF-1R and electronic input file	Re-review to verify project still meets the minimum energy efficiency requirement	Wait for reservation approval
	After the application is approved	Signed CF-1R and electronic input file	Conduct a second plan-check to verify project still meets the minimum energy efficiency requirement and upload to HERS database if HERS rater information has already been provided	Continue with installation and have the measures verified by a HERS rater
	After a HERS verification is conducted	Signed CF-1R and electronic input file	Conduct a second plan-check to verify project still meets the minimum energy efficiency requirement and upload to HERS database	HERS rater re-verifies measures. If the project passes tests, then a CF-4R is created.



SDG&E Contact Information

- Website:
www.sce.com/NSHP
- E-mail: NSHP@sce.com
- Phone: 1-866-584-7436
- Fax: 626-633-3402
- Mailing Address:
SCE
Attn: New Solar Homes
Partnership
Program Administrator
6042A North Irwindale Ave.
Irwindale, CA 91702-3207



Additional Training: NSHP Online Submission

- Thursday, March 11, 2010, 9:00 am
- <https://energy.webex.com>
 - Meeting number: 927 076 404
 - Password: training@9